Claims

1. A substrate for use as a ligate carrier in a method for detecting ligate-ligand association events, having test sites (24) disposed on the substrate and having ligates (26) bound to the surface of the test sites (24), at least two types of test sites (24) being provided, the different types of test sites each being loaded with different types of ligates (26), the different types of ligates (26) detecting the respective complementary types of ligands, the ligands being present in an analyte solution in different concentration ranges in each case, and the test sites (24) exhibiting a characteristic loading parameter that permits detection of the ligands in their respective concentration range.

2. The substrate according to claim 1, wherein the characteristic loading parameter is the surface area of the test sites.

3. The substrate according to claim 2, wherein the surface area of the test sites (24) differs by at least a factor of 10.

4. The substrate according to claim 2, wherein the surface area of the test sites (24) differs by at least a factor of 100.

5. The substrate according to claim 2, wherein the surface area of the test sites (24) differs by at least a factor of 1,000.

6. The substrate according to claim 2, wherein the surface area of the test sites (24) differs by at least a factor of 10,000.

7. The substrate according to one of claims 2 to 6, wherein the surface area of the test sites (24) measures between 1 μm^2 and 10 mm^2.

8. The substrate according to claim 7, wherein the surface area of the test sites (24) measures between 10 μm^2 and 100,000 μm^2.

9. The substrate according to one of the preceding claims, wherein the characteristic loading parameter is the loading density of the test sites with ligates.

10. The substrate according to claim 9, wherein the loading density of the test sites (24) with ligates differs by at least a factor of 10.

11. The substrate according to claim 9, wherein the loading density of the test sites (24) with ligates differs by at least a factor of 100.

12. The substrate according to claim 9, wherein the loading density of the test sites (24) with ligates differs by at least a factor of 500.

13. The substrate according to one of the preceding claims, wherein the respective mean values of the concentration ranges in which the different types of ligands are present differ by at least a factor of 10.

14. The substrate according to claim 13, wherein the respective mean values of the concentration ranges in which the different types of ligands are present differ by at least a factor of 100.

15. The substrate according to claim 13, wherein the respective mean values of the concentration ranges in which the different types of ligands are present differ by at least a factor of 1,000.

16. The substrate according to claim 13, wherein the respective mean values of the concentration ranges in which the different types of ligands are present differ by at least a factor of 10,000.

17. The substrate according to one of the preceding claims, wherein cofactors or coenzymes are used as ligands, and proteins or enzymes are used as ligates.

18. The substrate according to one of claims 1 to 16, wherein antibodies are used as ligands, and antigens are used as ligates.

5   19. The substrate according to one of claims 1 to 16, wherein antigens are used as ligands, and antibodies are used as ligates.

20. The substrate according to one of claims 1 to 16, wherein receptors are used as ligands, and hormones are used as ligates.

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21. The substrate according to one of claims 1 to 16, wherein hormones are used as ligands, and receptors are used as ligates.

22. The substrate according to one of claims 1 to 16, wherein nucleic acid oligomers

15   are used as ligands, and nucleic acid oligomers that are complementary thereto are used as ligates.

23. The substrate according to one of the preceding claims, wherein the substrate is loaded with a passivation layer that exhibits clearances at the test sites (24).

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24. Use of a substrate according to one of the preceding claims in a method for detecting ligate-ligand association events.

25. The use according to claim 24, wherein an electrochemical detection method is

25   involved, selected from the group chronoamperometry (CA), chronocoulometry (CC), linear sweep voltammetry (LSV), cyclic voltammetry (CSV), alternating current voltammetry (ACV), voltammetry techniques with different pulse shapes, especially square wave voltammetry (SWV), differential pulse voltammetry (DPV) or normal pulse voltammetry (NPV), AC or DC impedance spectroscopy,

30   chronopotentiometry and cyclic chronopotentiometry.

26. The use according to claim 24, wherein a fluorescent spectroscopic detection method is involved.